

FIG.1A

FIG. 1B

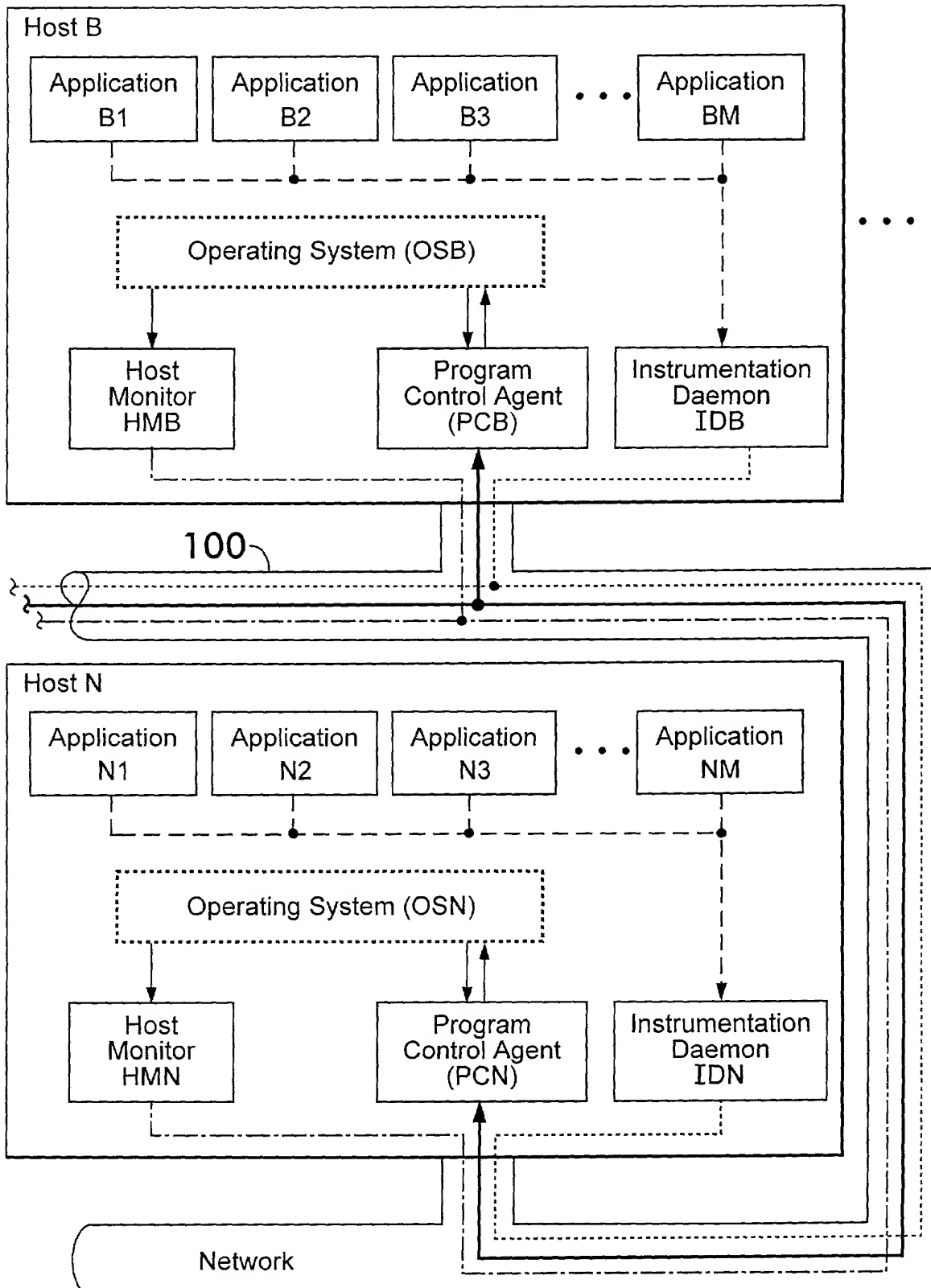
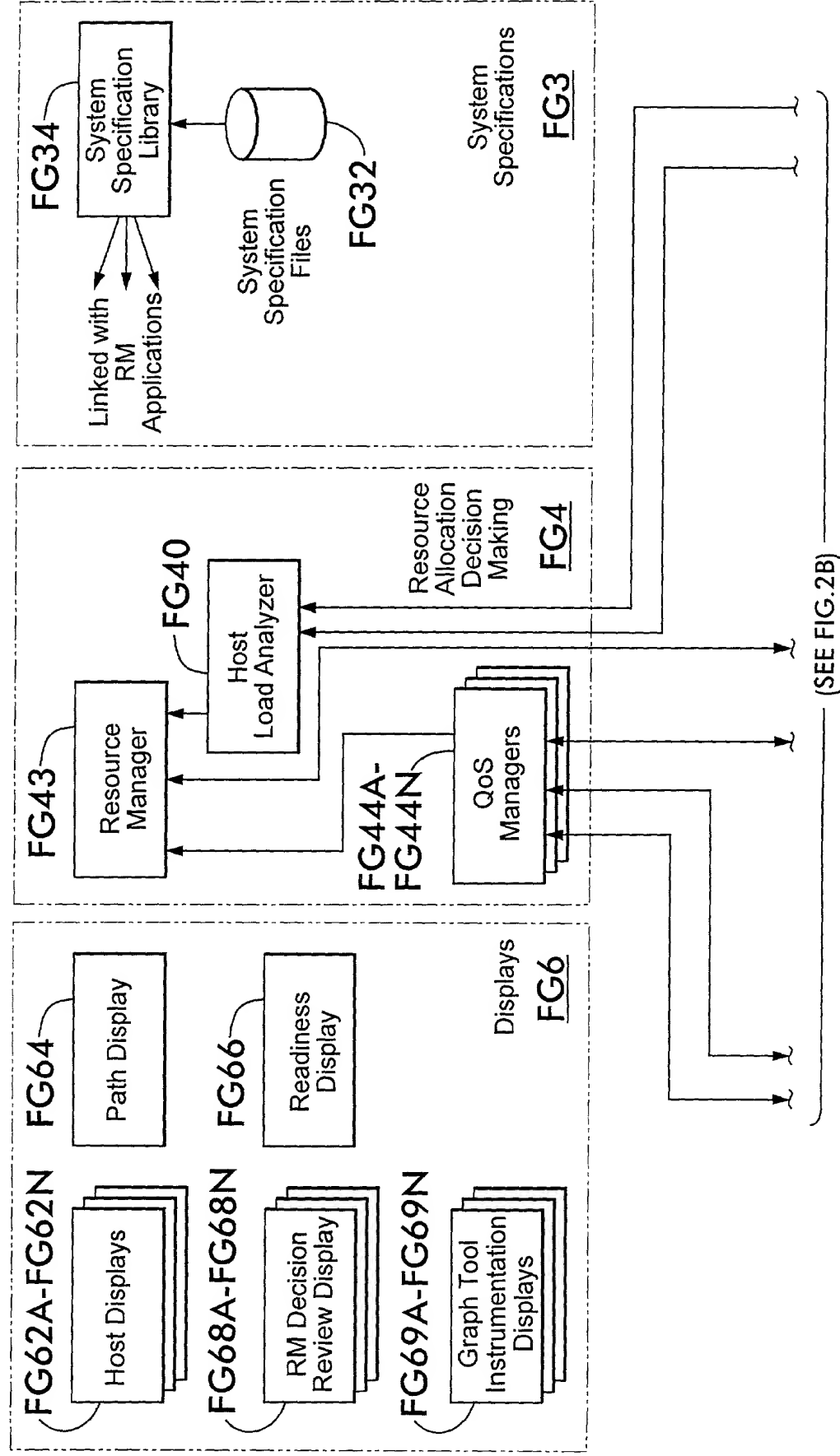
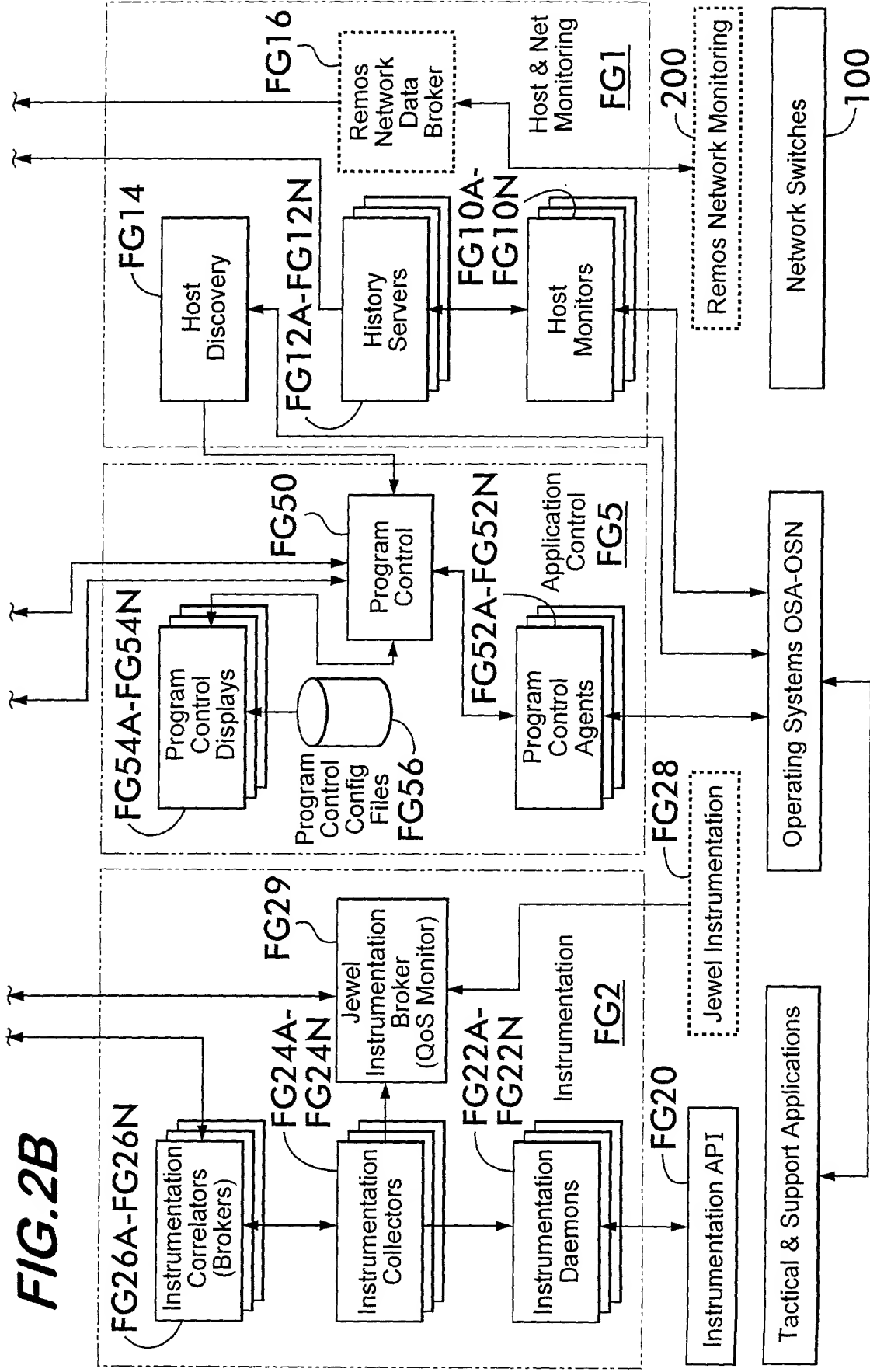


FIG. 2A





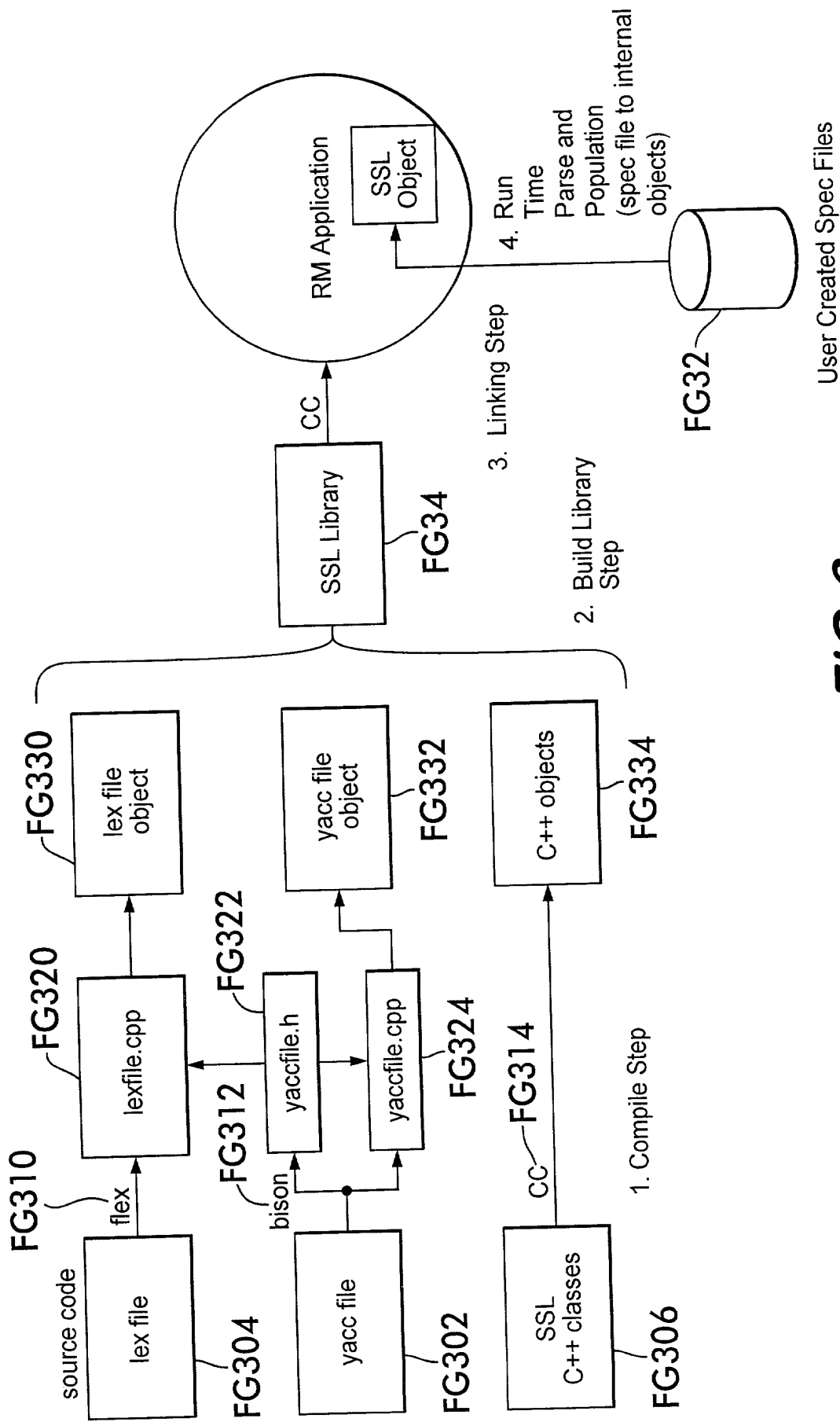


FIG.3

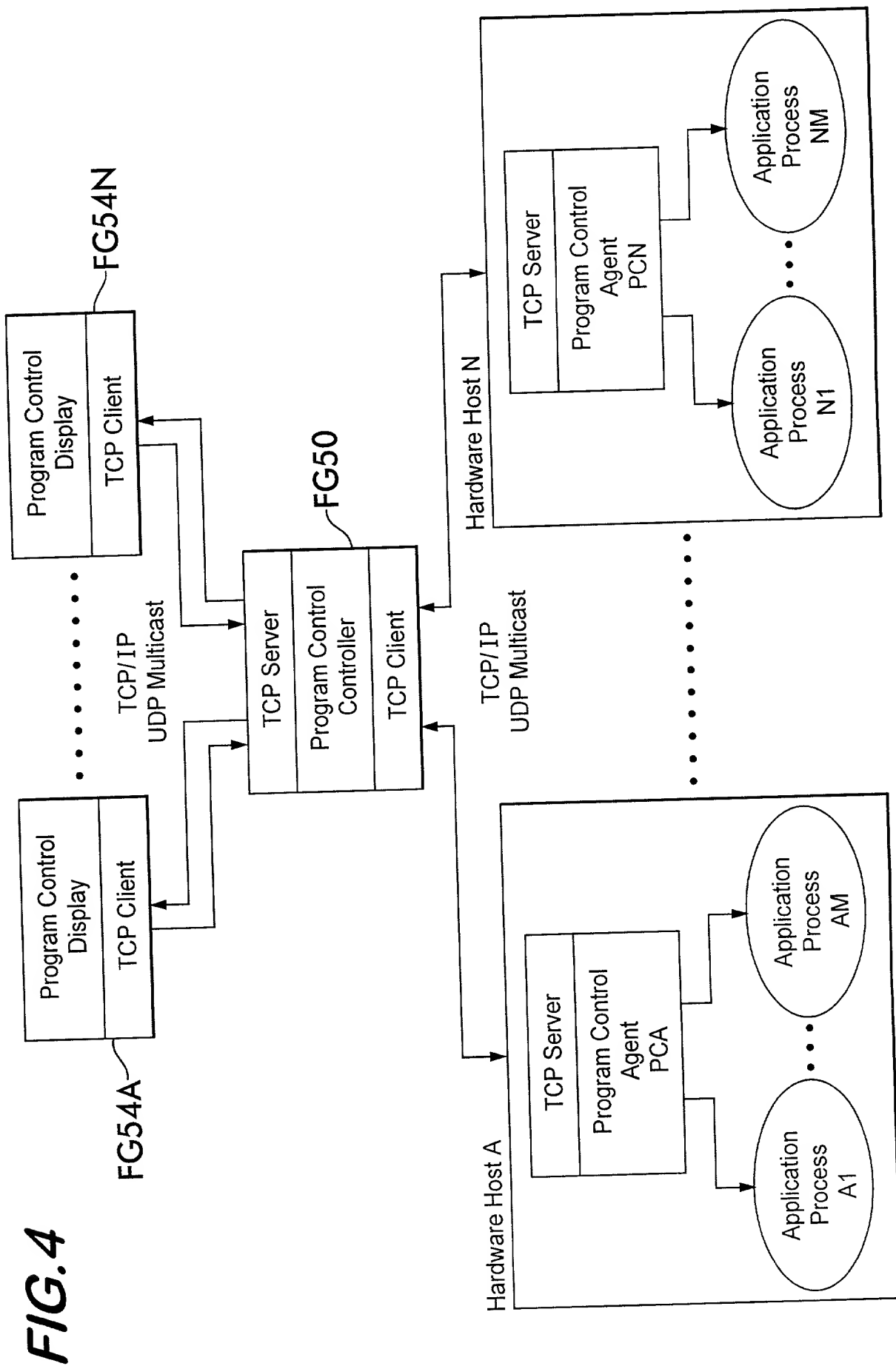


FIG.5A

Program Control Display

File

Edit

Options

Host Info

Available Hosts

Hostname

alphe1
alphe2
alphe3
serpens
adara1
adara2
adara3
adara4
adara5
pallas

Tools

Start Selected

Stop Selected

Start Configuration

Stop All

Without Dependencies

Run-Order View

Application

AAW:Displays:State_Server
AAW:Displays:fc term
AAW:Displays:Tactical Picture
AAW:Tactical_Services:Engagement_Server
AAW:Tactical_Services:Engagement_Server
AAW:Tactical_Services:Engagement_Server
AAW:Tactical_Services:Deconfliction_Server
AAW:Tactical_Services:Doctrine_Server
DIICOE:DII_COE_Services:Tdbm
DIICOE:DII_COE_Services:DII_COE_Broker
DIICOE:DII_COE_Display

Hostname

alphe1
alphe1
alphe1
serpens
alphe1
alphe3
alphe2
alphe2
draco
draco
lepus

Process ID

(SEE FIG.5B)

ursa	Auto	lafonte	AAW:Tactical_Services:Manual_Engage	serpens
algol	Manual	lafonte	AAW:Tactical_Sims:WCS_Simulator	alphe3
carina	Auto	lafonte	AAW:Tactical_Sims:Gun_Simulator	serpens
cetus	Auto	lafonte	AAW:Tactical_Sims:CFF_Broker	serpens
corvus	Manual	lafonte	IDSys:ID_Broker	corvus
cordelia	Manual	lafonte	IDSys:SpyServer	deneb2
draco	Auto	lafonte	AAW:Tactical_Sims:IDU_Simulator	serpens
juliet	Auto	lafonte	AAW:Doctrine:Auto_Special	serpens
leda				

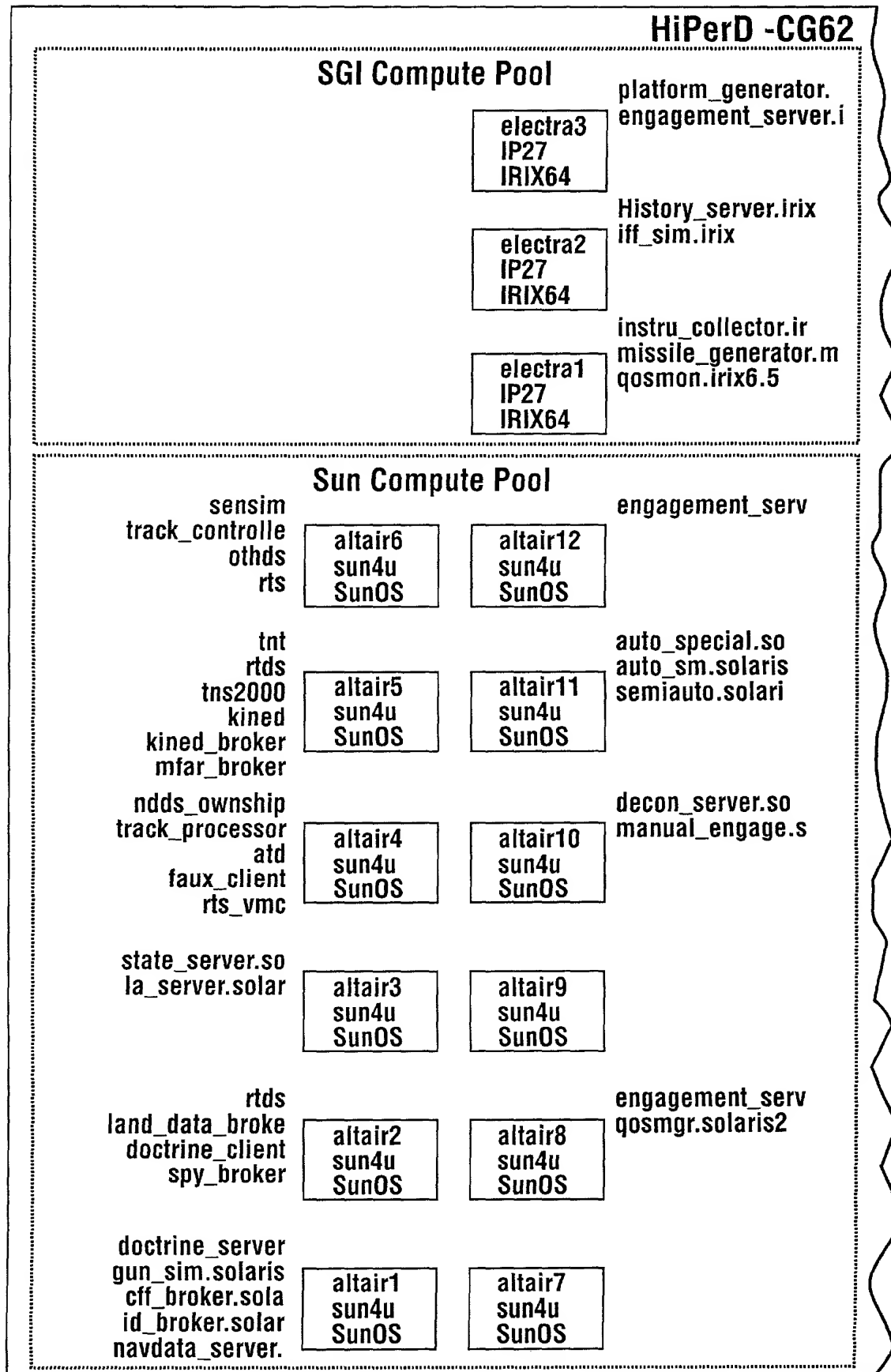
Alerts

FIG.5B

FIG.6A

(SEE FIG.6B)

TOP SECRET



The diagram illustrates the Globus Compute Pool architecture, divided into two main sections: Linux Compute Pool and WinNT Compute Pool.

Linux Compute Pool:

- Left Column (Hosts):**
 - DISBroker.linux
 - globus-daemons-lrmstatus.csh
 - globusbroker.li
 - globusbroker.li
 - globusbroker.li
 - mfarsim.ndds.l
- Right Column (Nodes):**
 - lupus1: Pentium III (c Linux)
 - lupus11: Pentium III (c Linux)
 - lupus10: Pentium III (c Linux)
 - lupus9: Pentium III (c Linux)
 - lupus8: Pentium III (c Linux)
 - lupus7: Pentium III (c Linux)
 - lupus6: Pentium III (c Linux)
 - lupus5: Pentium III (c Linux)
 - lupus4: Pentium III (c Linux)
 - lupus3: Pentium III (c Linux)
 - lupus2: Pentium III (c Linux)

WinNT Compute Pool:

- Left Column (Hosts):**
 - java
 - java
 - java
 - java
 - java
 - java
 - java
 - java
 - java
 - java
- Right Column (Nodes):**
 - phoebe7: Pentium Pro Windows NT
 - phoebe6: Pentium Pro Windows NT
 - phoebe4: Pentium Pro Windows NT
 - phoebe3: Pentium Pro Windows NT
 - phoebe2: Pentium Pro Windows NT
 - phoebe1: Pentium Pro Windows NT

Connections are indicated by lines between the Linux and WinNT sections, and within each section.

lupus1
Pentium III (c
Linux

lupus11
Pentium III (c
Linux

**lupus10
Pentium III (c
Linux**

lupus9
Pentium III (c
Linux

**lupus8
Pentium III (c
Linux**

**lupus7
Pentium III (c
Linux**

**Iupus6
Pentium III (c
Linux**

**lupus5
Pentium III (c
Linux**

**lupus4
Pentium III (c
Linux**

lupus3
Pentium III (c
Linux

**lupus2
Pentium III (c
Linux**

```
DISBroker.linux
globus-daemons-
  lrmstatus.csh
globusbroker.li
globusbroker.li
globusbroker.li
globusbroker.li
mfar_sim.ndds.l
```

Linux Compute Pool

java

phoebe7
Pentium Pro
Windows NT

java
java
java

**phoebe6
Pentium Pro
Windows NT**

java

phoebe4
Pentium Pro
Windows NT

phoebe3
Pentium Pro
Windows NT

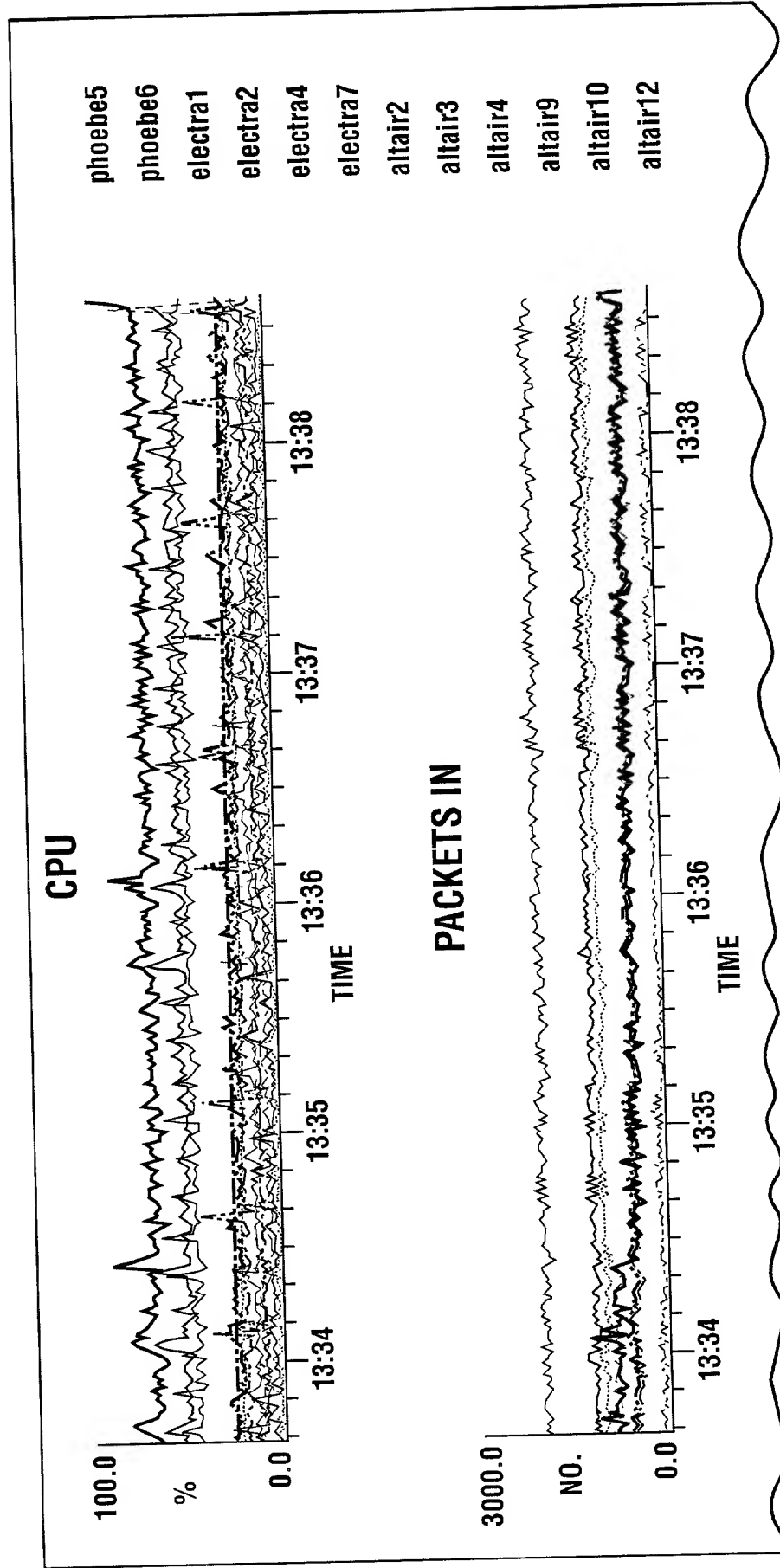
java

phoebe2
Pentium Pro
Windows NT

java

phoebe1
Pentium Pro
Windows NT

FIG. 7A



(SEE FIG. 7B)

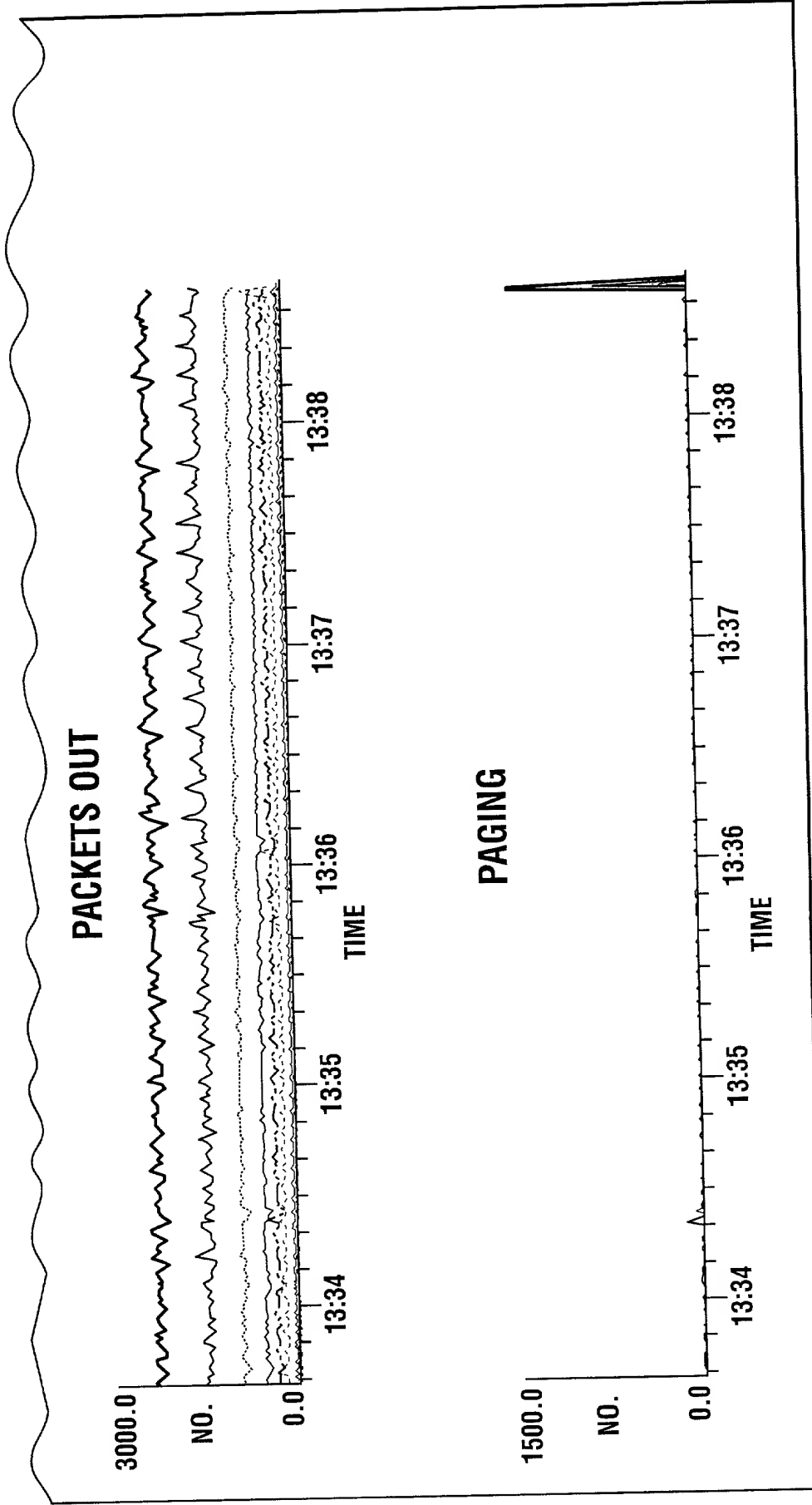
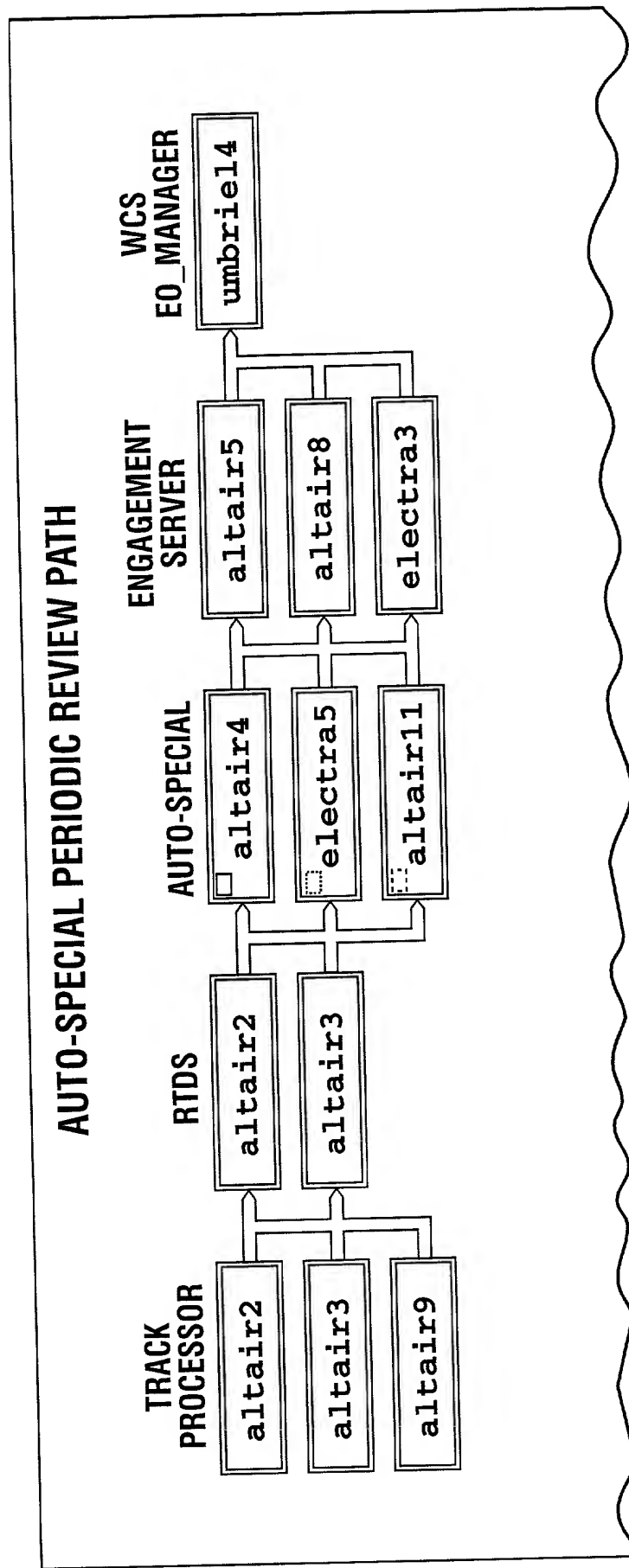


FIG. 7B

FIG.8A



(SEE FIG.8B)

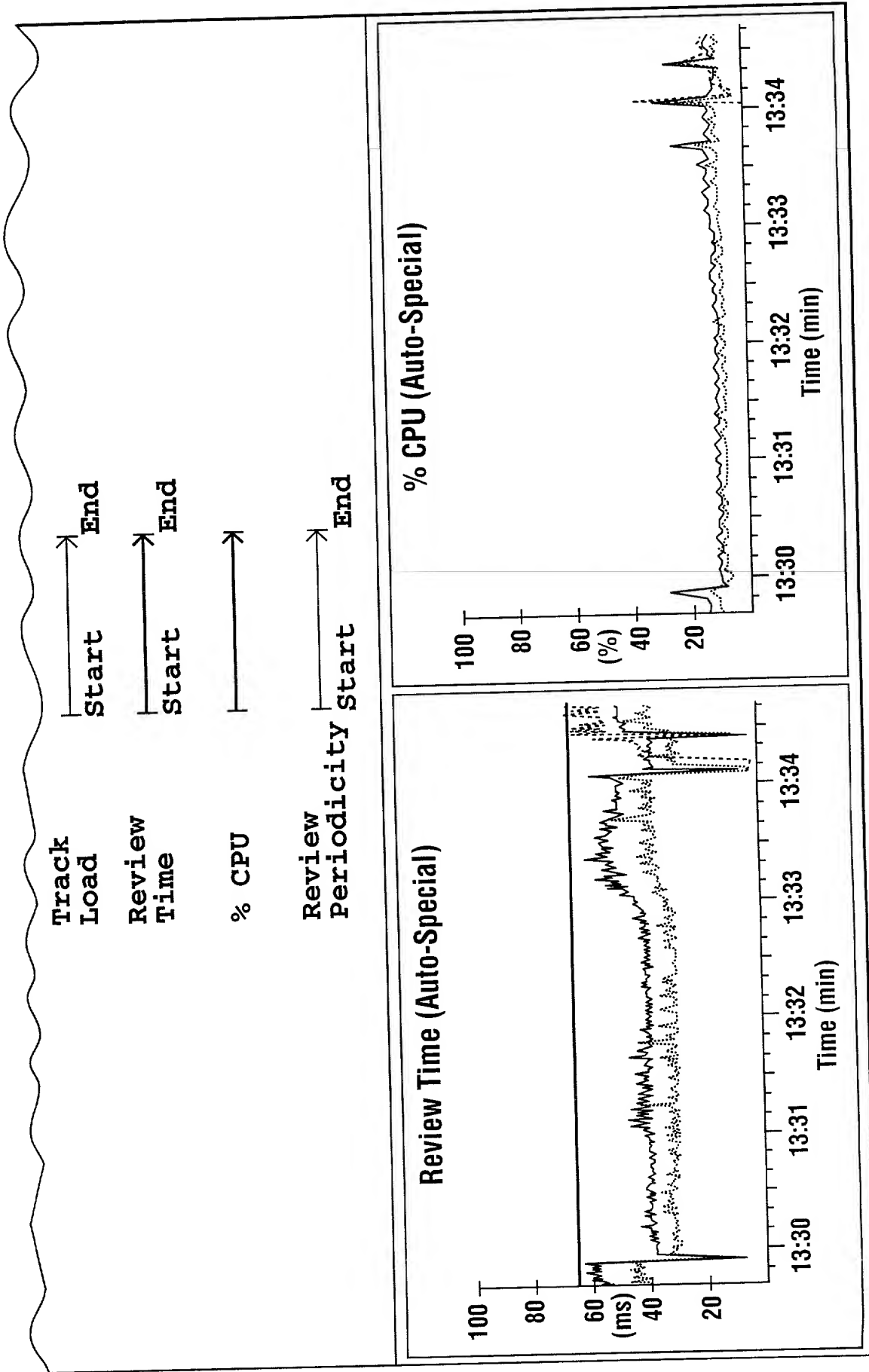


FIG.8B

FIG. 9A

Resource Management

☐ SCALE UP PLOT

EVENTS HISTORY

EVENT#	ACTION TYPE	APPLICATION NAME	HOST EVENT	HOST ACTION
25	Application Scale Down	TBM_Doctrine	lupus7	
26	Application Scale Down	TBM_Doctrine	lupus7	
27	Application Scale Down	Engageability	altair10	
28	Application Scale Down	Engageability	altair12	
29	Application Scale Down	Engageability	altair8	
32	Application Restarted	QosManager_SpyDeclaredAS	orion1	altair8
33	Application Scale Up	Semi_Auto	altair11	electra2
34	Application Scale Up	Semi_Auto	altair11	altair7
35	Application Scale Up	Auto_Special	altair11	altair9
36	Application Scale Up	Semi_Auto	altair11	altair3

APPLICATION: Semi_Auto EVENT#: 36

EVENT: Application Overload
PID:9615 ON HOST altair11

EVENT TIME: 14:24:56.6355

ACTION: Application Scale Up
PID:10186 ON HOST altair3

ACTION TIME: 14:24:56.6427 14:24:56.6846

RESPONSE TIME: 0.0073 0.0491

APPLICATION: Auto_Special EVENT#: 35

EVENT: Application Overload
PID:9613 ON HOST altair11

EVENT TIME: 14:24:33.2620

ACTION: Application Scale Up

(SEE FIG. 9B)

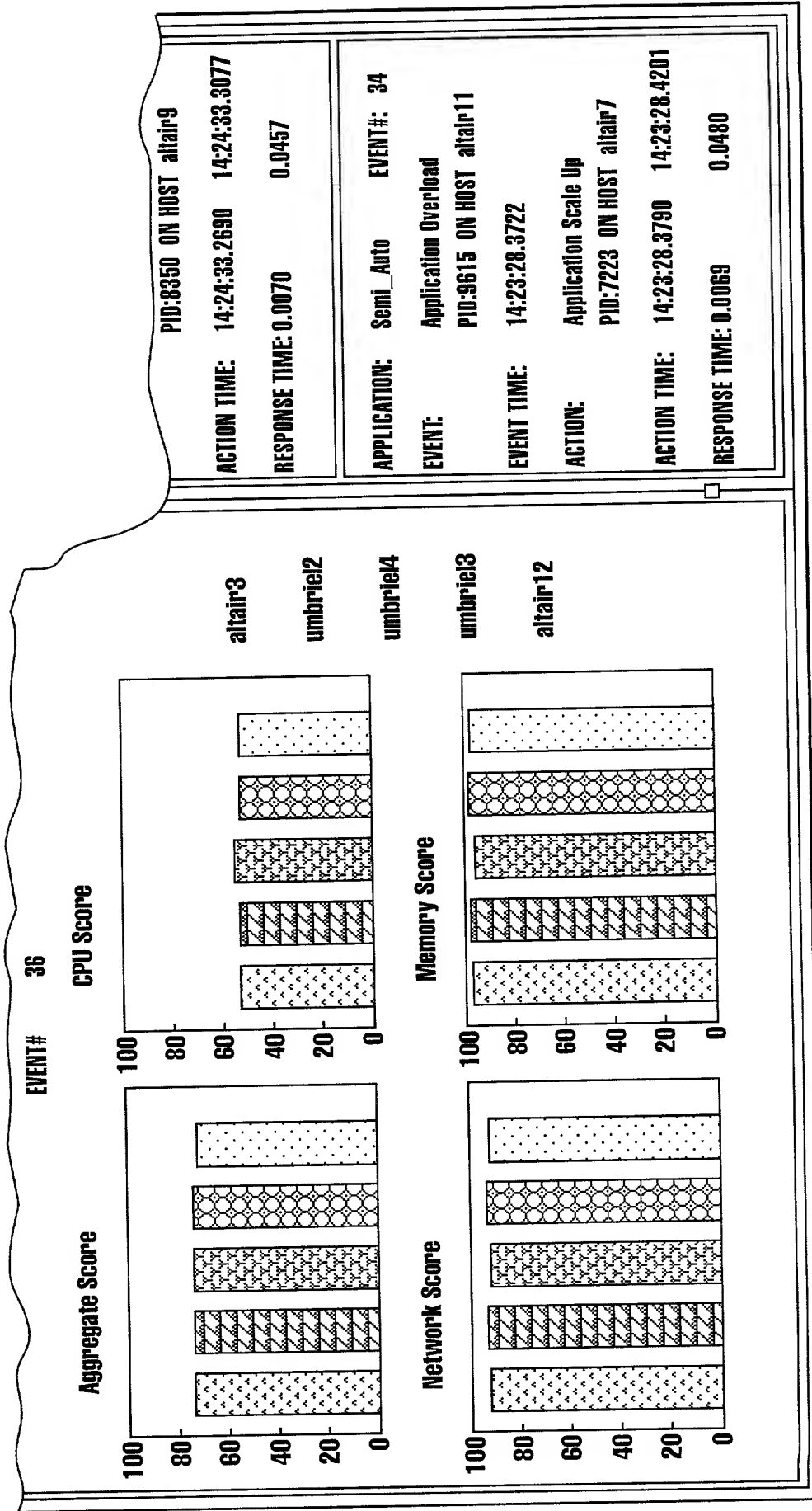
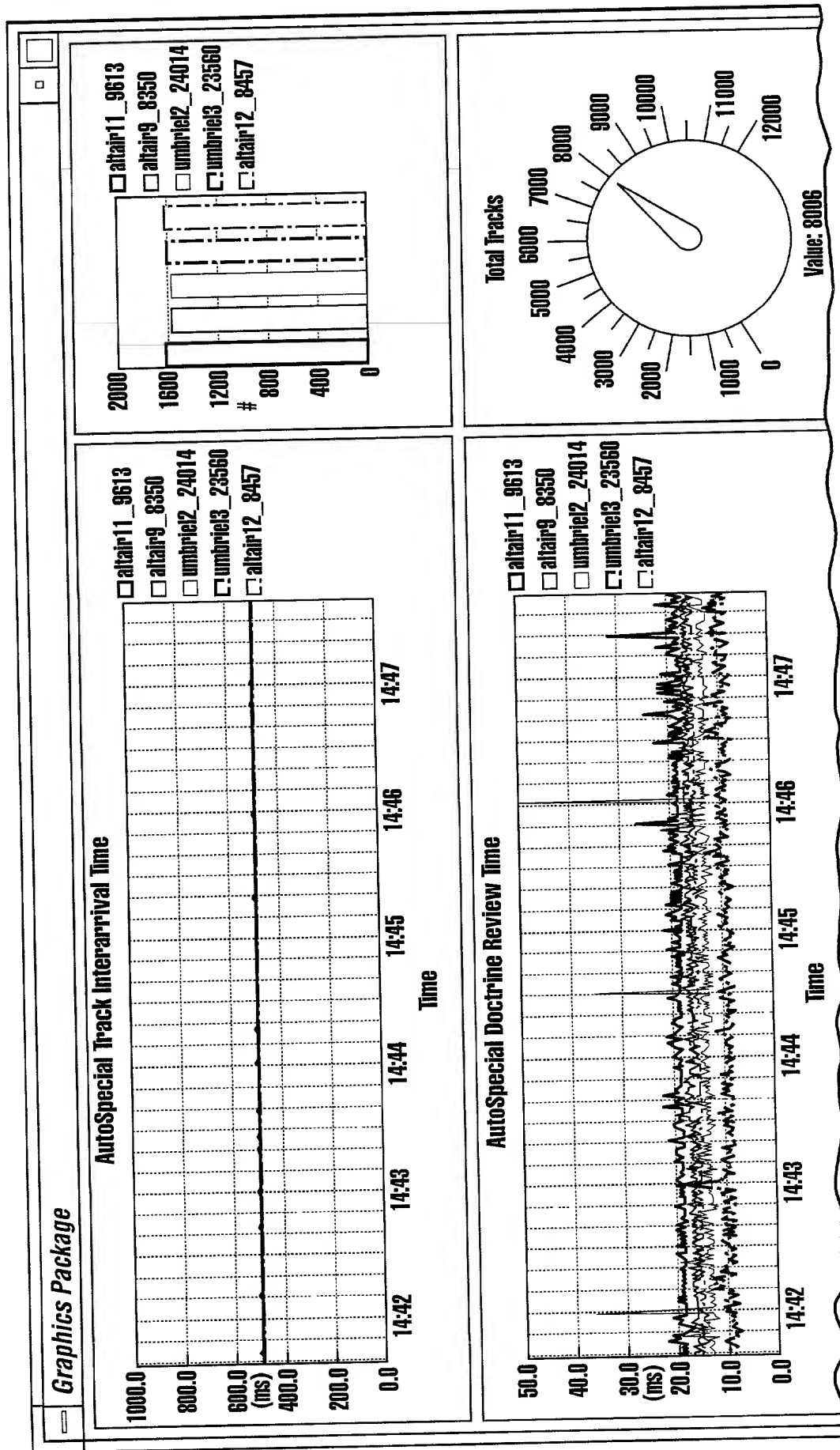


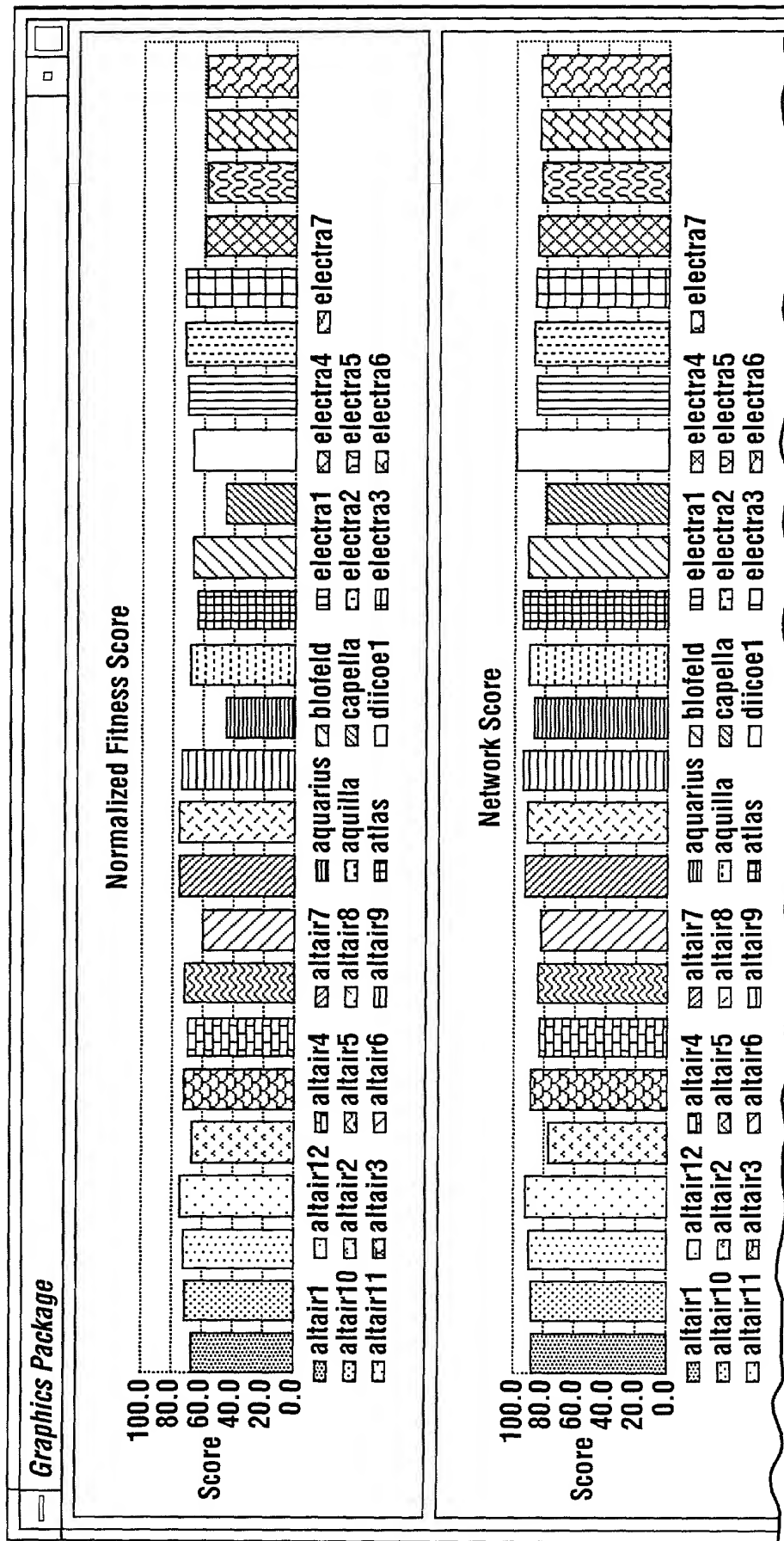
FIG.9B

FIG.10A



(SEE FIG.10B)

FIG. 11A



(SEE FIG. 11B)

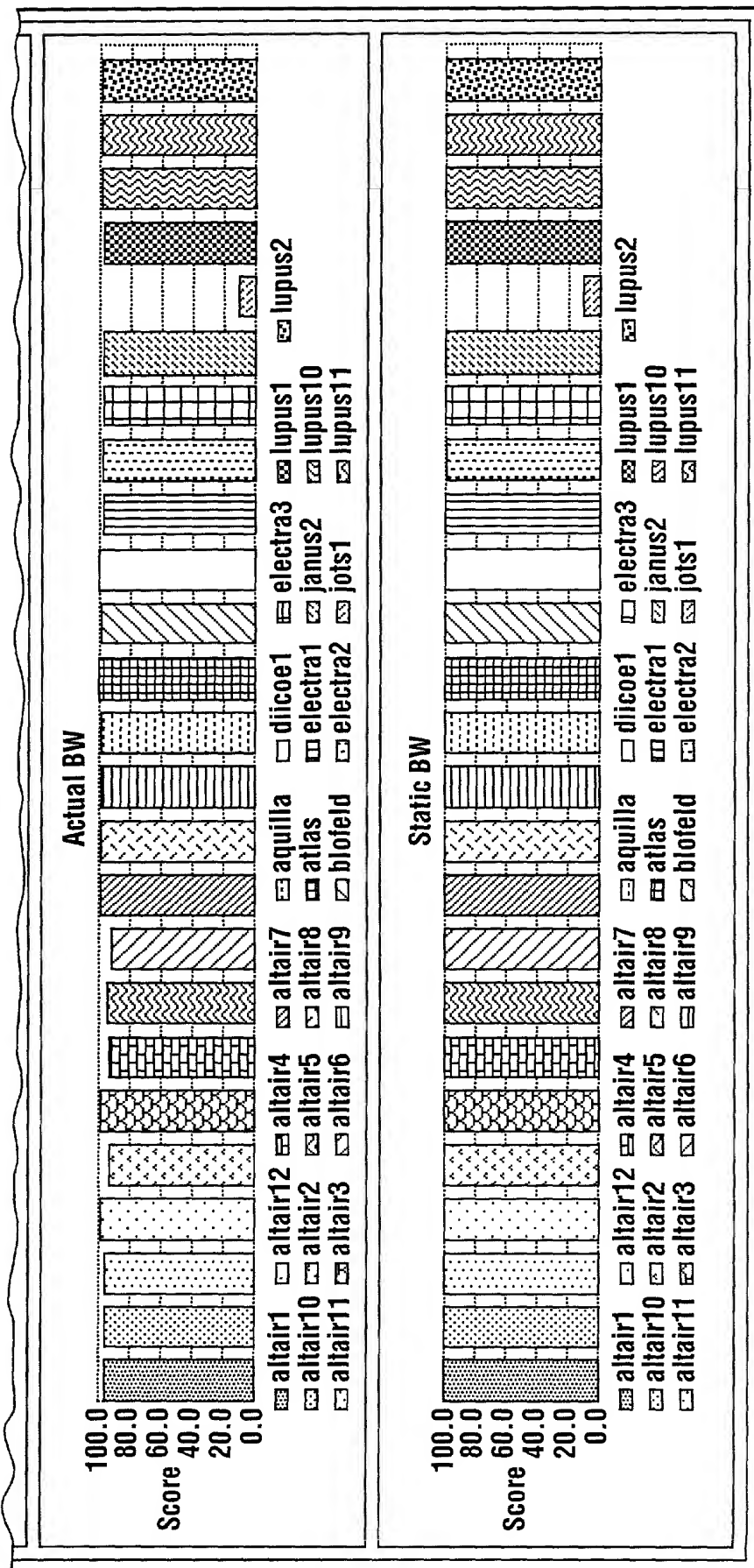
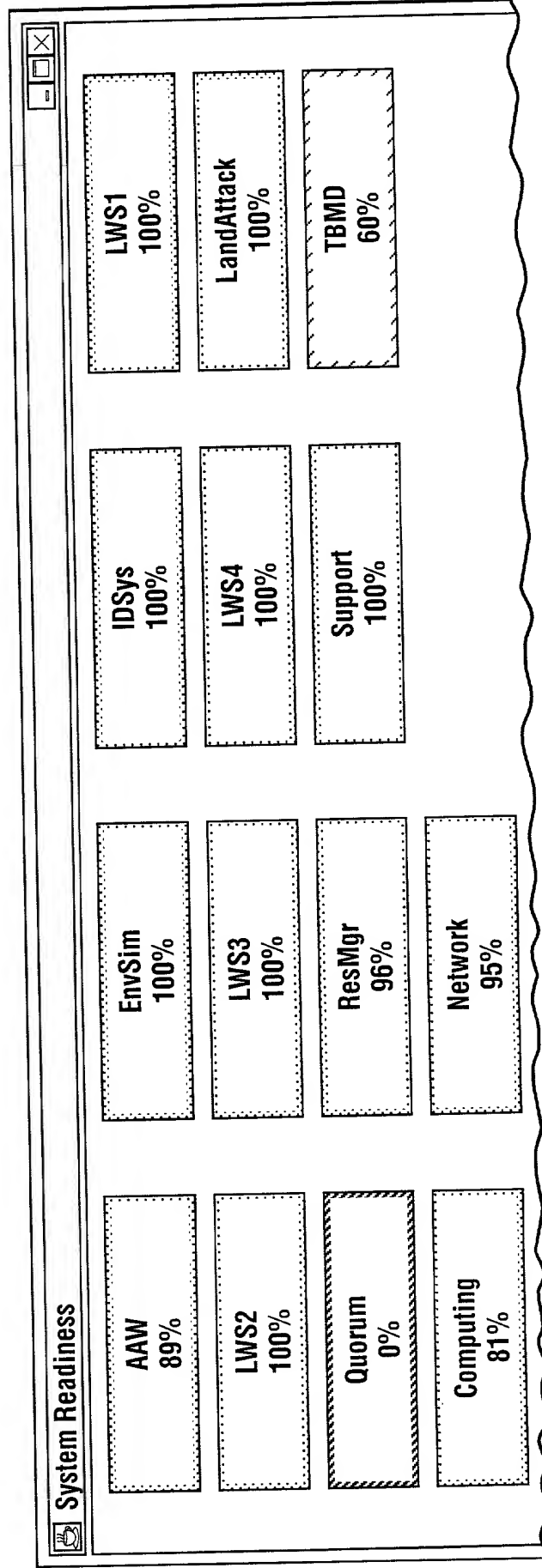


FIG.11B

FIG.12A



(SEE FIG.12B)

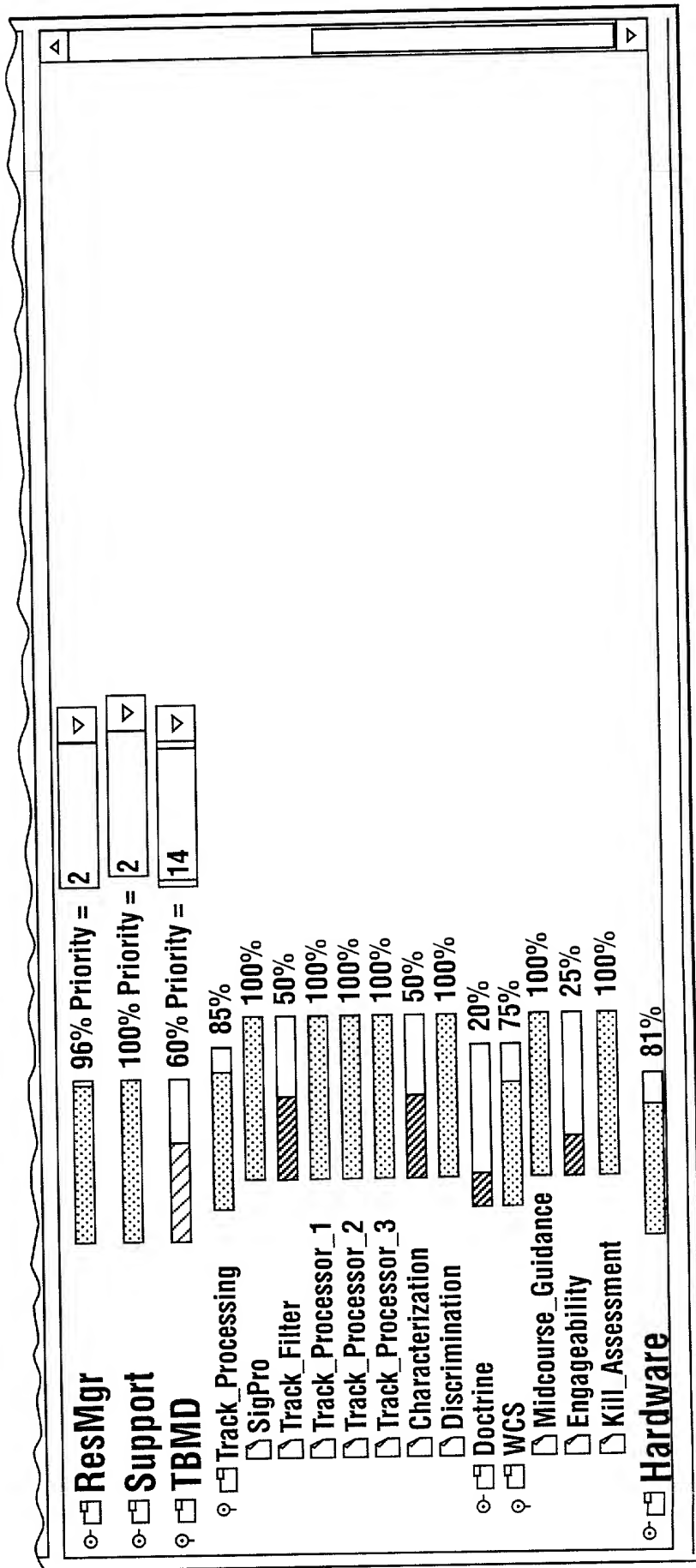


FIG.12B

FIG. 13A

A. Detection of Unacceptable QoS

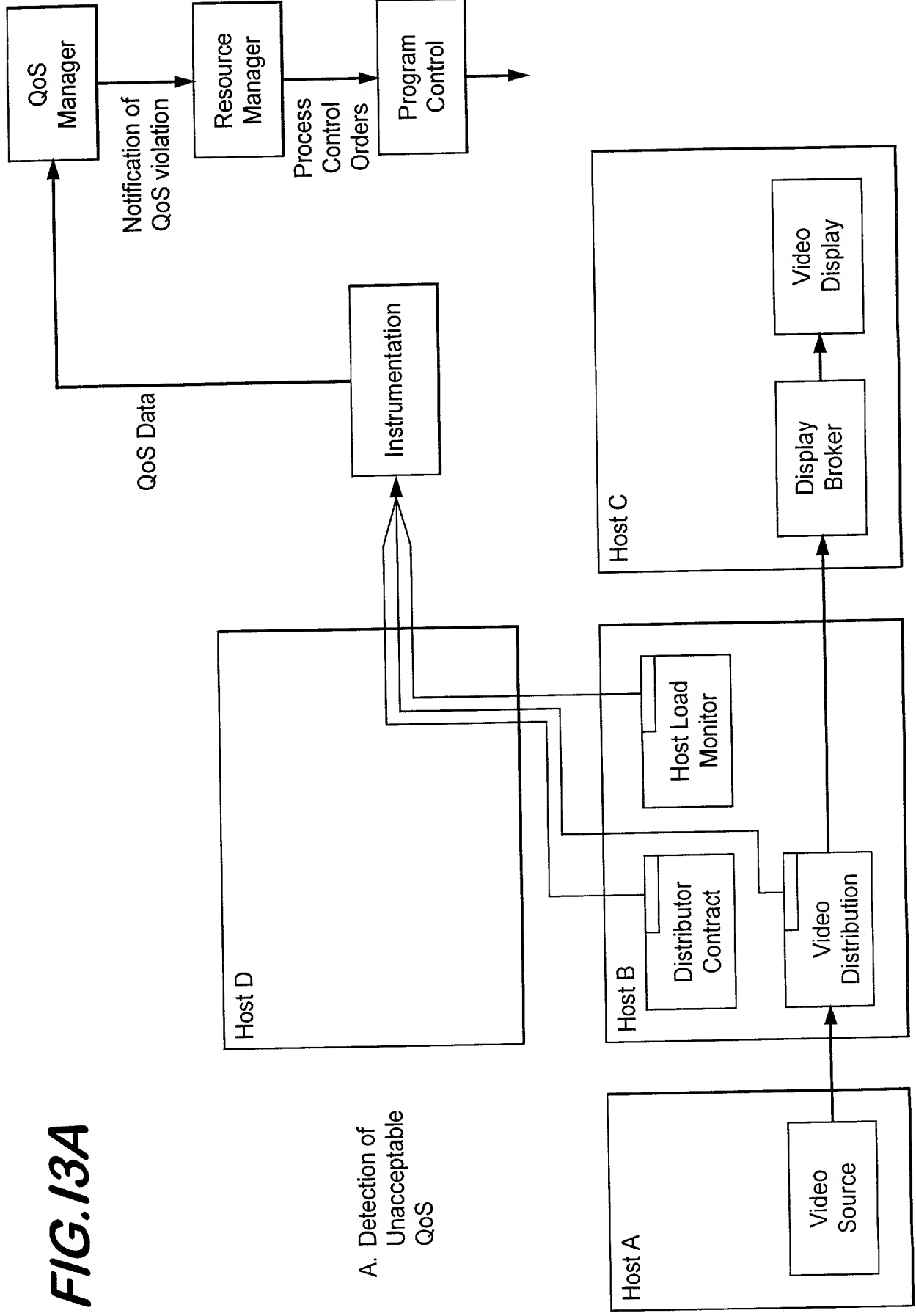
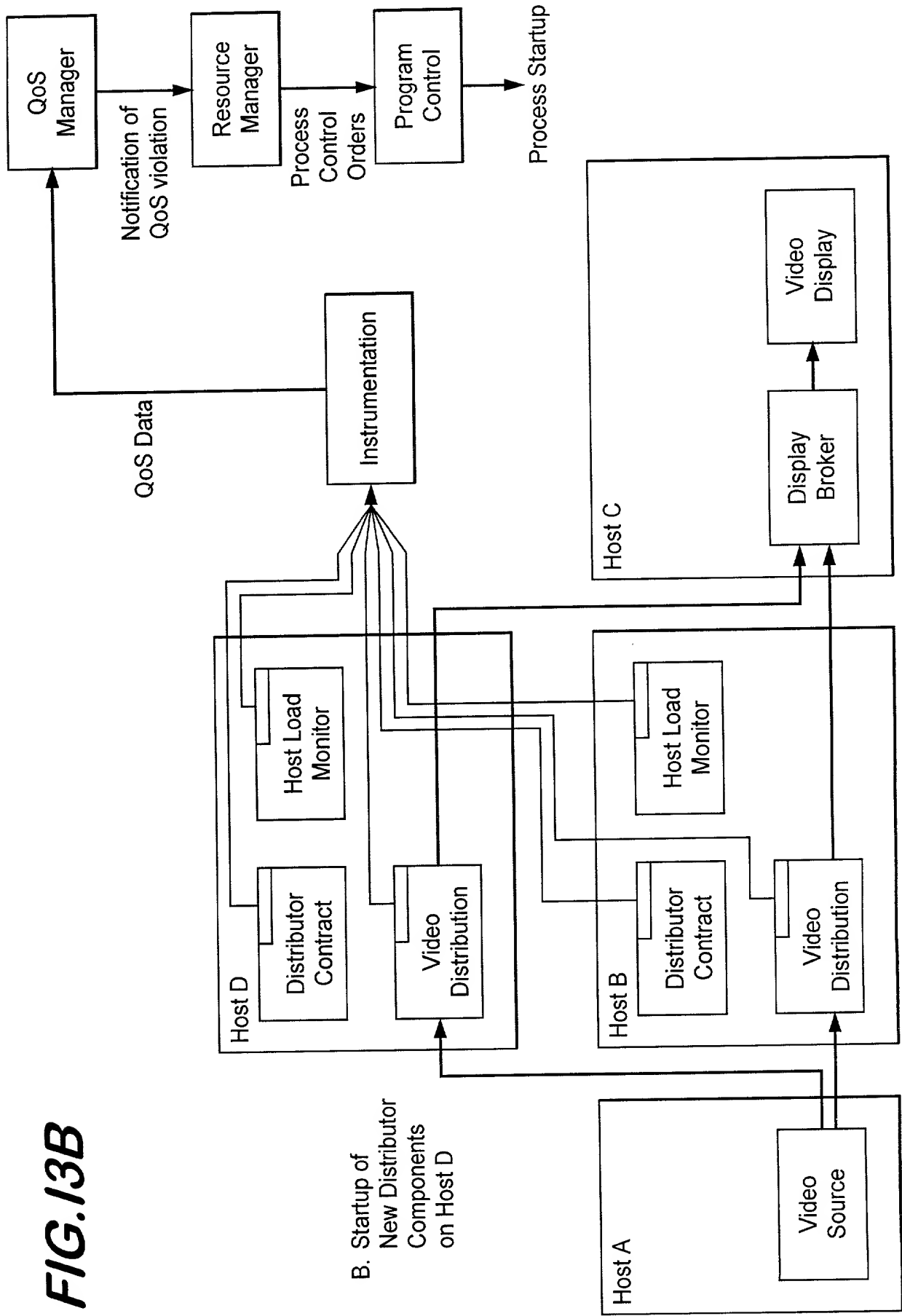
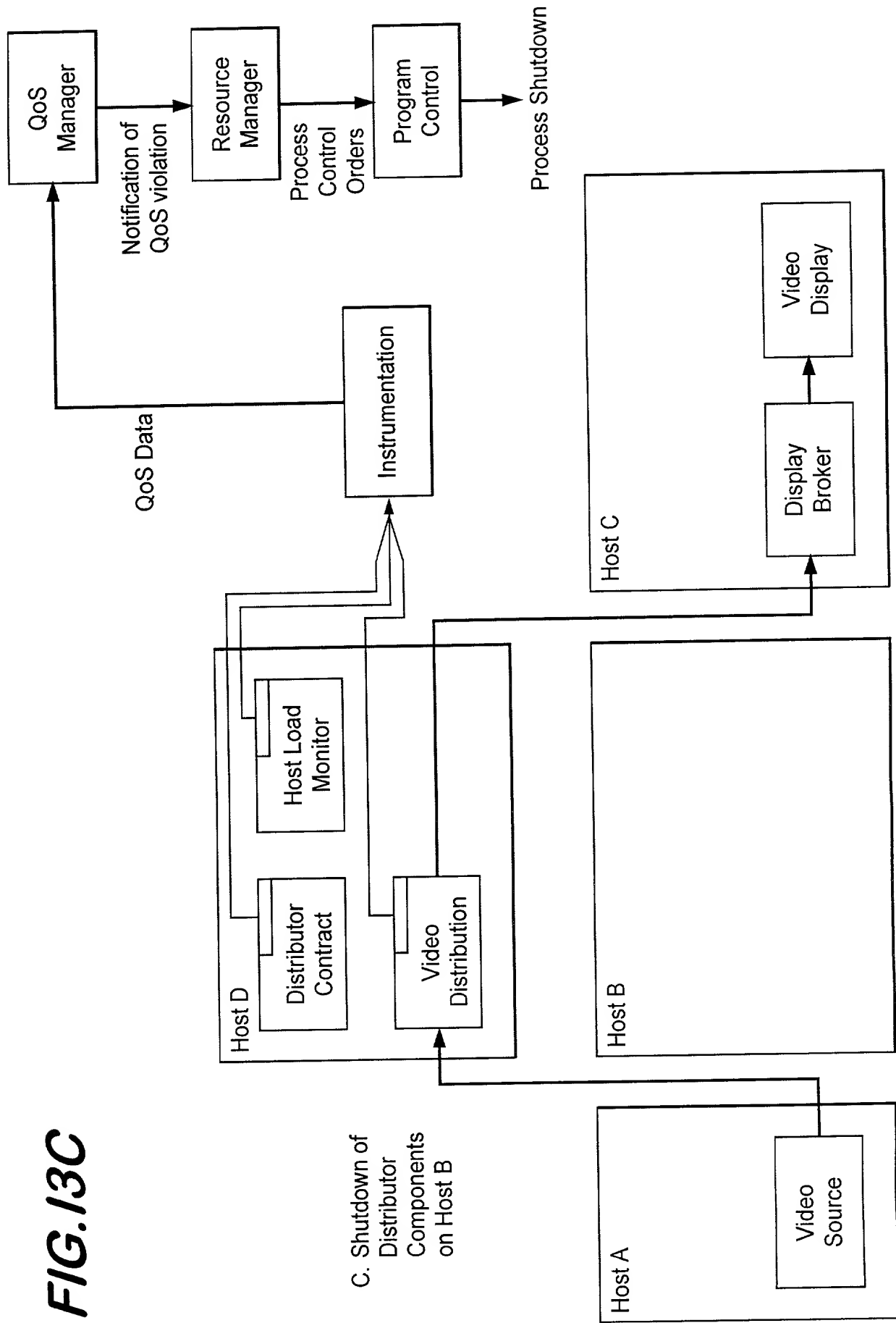


FIG.13B



B. Startup of
New Distributor
Components
on Host D

FIG. 13C



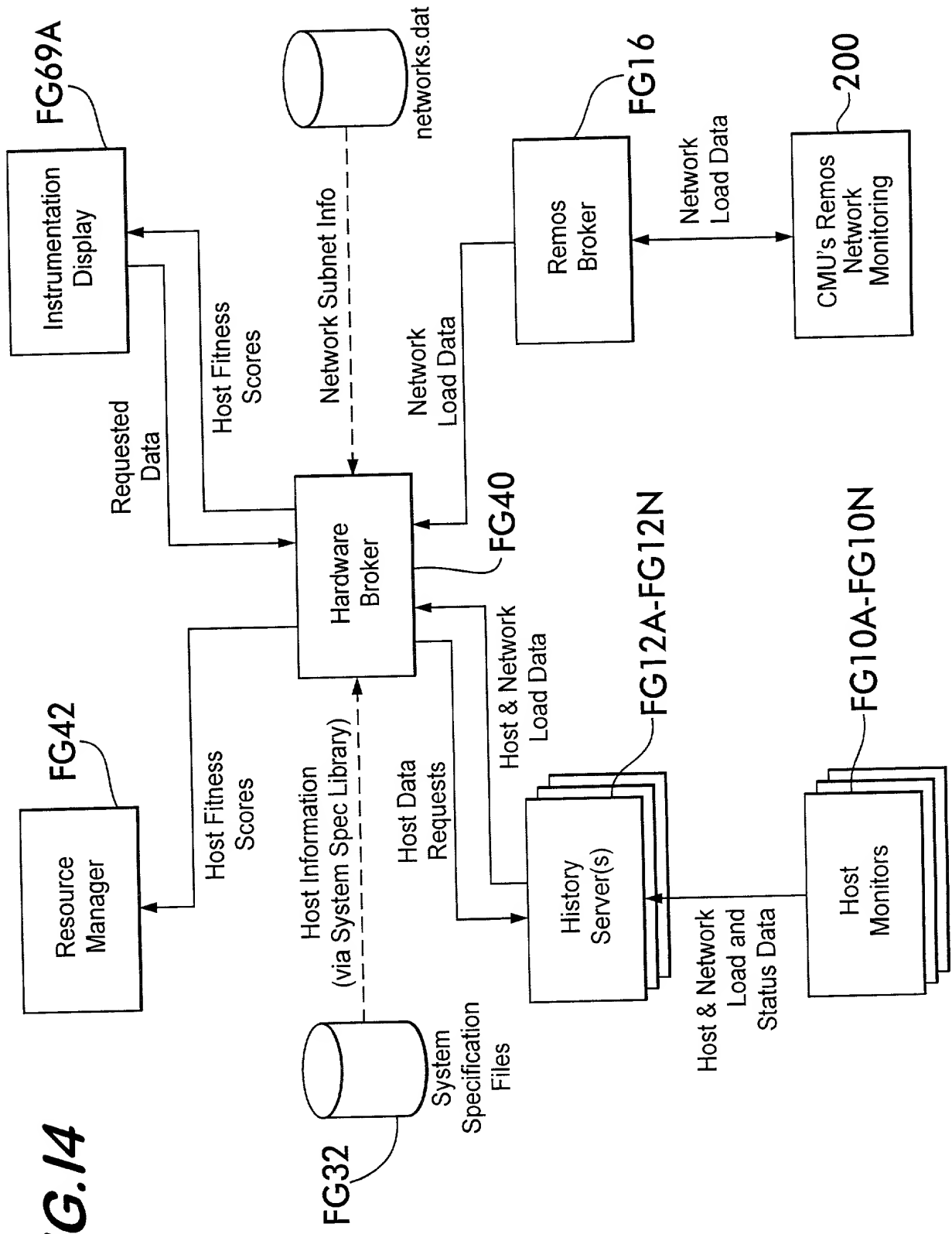


FIG.15

